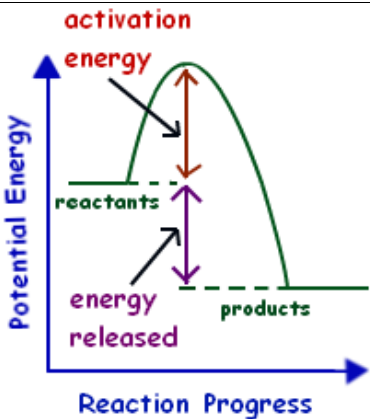


## Crystal ball questions on Endothermic and Exothermic reactions

*All of the following questions have not (as yet!) appeared in the NCEA Level 2 Exams*

QUESTION: Classify the following reactions as endothermic or exothermic

Reactions	Endothermic or Exothermic reaction
a lit firework	
petrol evaporating	
	
an illuminous glowstick	
cooking an egg	
Kathmandu hand warmer	
nuclear fission	
Thermite reaction used to repair railway tracks $\text{Al} + \text{Fe}_2\text{O}_3 \rightarrow \text{Al}_2\text{O}_3 + \text{Fe}$	
$6\text{CO}_2 + 6\text{H}_2\text{O} \xrightarrow{\text{light}} \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$	
ice melting	
magnesium ribbon burning in air	

alcohol evaporating	
$\text{C}(s) + \text{O}_2(g) \rightarrow \text{CO}_2(g) \quad \Delta_r H = -393 \text{ kJ mol}^{-1}$	
sulfuric acid + water, resulting in a temperature rise of 22 °C	
respiration of all living things	
salt crystals forming from a salt solution	
iodine resubliming (from a gas to solid state)	
a bonfire	
methane gas burning in a bunsen burner	
water added to fertiliser resulting in a temperature decrease	